

IFW #



I hereby certify that this correspondence is being deposited with the US Postal Service with sufficient postage as First Class Mail in an envelope addressed to the Mail Stop Missing Parts, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Date: October 27, 2006

By: *Kay L. Saviglio*
Kay L. Saviglio

PATENT
Docket No. GC812-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
)	Group Art Unit: 1652
Clarkson et al.)	
)	Examiner: I. H. Chowdhury, Ph.D.
Serial No.: 10/565,954)	
)	
Filed: January 26, 2006)	
)	
For: MODIFIED ENZYMES, METHODS)	
TO PRODUCE MODIFIED)	
ENZYMES AND USES)	
THEREOF)	

Information Disclosure Statement

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit herewith patents, publications or other information (listed on the attached Form PTO-1449 and attached thereto) of which they are aware, that they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

This Information Disclosure Statement:

- (a) ☐ accompanies the new patent application submitted herewith. 37 CFR §1.97(a).
- (b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry into the national stage of a PCT application as set forth in 37 CFR §1.491.
- (c) ☐ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits.

11/01/2006 RHEBRAHT 00000007 071048 10565954
01 FC:1806 180.00 DA

(d) ☒ is filed after the first Office Action and more than three months after the application filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180.00) set forth in 37 CFR §1.17(p) or a certification as specified in 37 CFR §1.97(e), as checked below. Authorization to charge Deposit Account No. 07-1048 in the amount of \$180.00 to cover the cost of this Information Disclosure Statement is provided in the Transmittal Letter submitted herewith in duplicate.

(e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by authorization (in the Transmittal Letter submitted herewith in duplicate) to charge Deposit Account No. 07-1048 the fee (\$180.00) set forth in 37 CFR §1.17(l)(1) and a certification as specified in 37 CFR §1.97(e), as checked below. **This document is to be considered as a petition requesting consideration of the Supplemental Information Disclosure Statement.**

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR §1.97(e) may need to be completed.] The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ No item of information contained in this Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Those patent(s) or publication(s) which are marked with an asterisk (*) on the attached Form PTO-1449 (**Books not sent**) are not supplied. Complete bibliographic information is unknown or unavailable. The cited publications are books or reference manuals and are commonly available. Reproduction of such publications would result in a voluminous submission.

A concise explanation of relevance of the items listed on PTO-1449 is:

☒ not given

- ☐ given for each listed item
- ☐ given for only non-English language listed item(s)
- ☐ in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

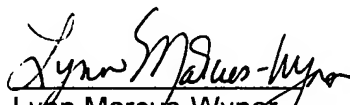
The Examiner is reminded that a "concise explanation of the relevance" of the submitted prior art "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention." MPEP §609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR §1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR §1.97(b), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR §1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR §1.98 and MPEP §609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

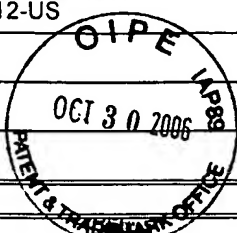
Date: October 27, 2006


Lynn Marcus-Wyner
Registration No. 34,869

Genencor International, Inc.
925 Page Mill Road
Palo Alto, CA 94304-1013
Tel: 650-846-7620
Fax: 650-845-6504

INFORMATION DISCLOSURE CITATION

Attorney Docket No.: GC812-US		Serial No.: 10/565,954	
Applicant: Clarkson et al.			
Filing Date: July 31, 2006		Group: 1652	
Page <u>1</u> of <u>3</u>		Date of this Submission: October 27, 2006	



US PATENT DOCUMENTS

Examiner's	Document				Sub-	Filing
Initial	Number	Date	Name	Class	Class	Date
	4,683,202	07/28/97	Mullis			
	5,736,384	04/07/98	Fukunaga et al.			
	5,759,840	06/02/98	Sung et al			

FOREIGN PATENT DOCUMENTS

Examiner's	Document				Sub-	Translation
Initials	Number	Date	Country	Class	Class	Yes/No
	WO 01/27252	10/12/00	PCT			

OTHER DOCUMENTS

Examiner's	
Initials	Author, Title, Date, Pertinent Pages, etc.
	Altschul et al., "Basic local alignment search tool," <i>J Mol Biol.</i> , 1990 Oct 5, 215(3):403-410.
	Arase et al., "Stabilization of xylanase by random mutagenesis," <i>FEBS Lett.</i> V316:2, 123-127 (1993)
	*Ausubel et al., 1999 Short Protocols in Molecular Biology, 4 th Ed – Chapter 18 – BOOK NOT SENT
	*Ausubel et al., 1999, Short Protocols in Molecular Biology, pages 7-58 to 7-60 – BOOK NOT SENT
	Bailey et al., "Interlaboratory testing of methods for assay of xylanase activity," <i>J. Biotechnol.</i> , 23 257-270, (1992)
	Beucage S.L. et al., (1981) <i>Tetrahedron Letters</i> 22, p 1859-1869 ORDERED FROM LIBRARY 10/19
	Biely, P et al., "Soluble Chromogenic Substrates for the Assay of Endo-1,4-β-xylanases and Endo-1,4-β-glucanases," <i>Analytical Biochemistry</i> , 144, 142-146 (1985)
	Bodie et al., 1995 – should be 1994, "Strain improvement of chymosin-producing strains of <i>Aspergillus niger</i> var. awamori using parasexual recombination", <i>Encymae Microb. Technol.</i> , 1994, V. 16, pp. 376-382
	Bodie et al., 1995 – should be 1994, Economically Important Organic Acid and Enzyme Products, Chapter 22, pp. 561-602, <i>Progress in Industrial Microbiology</i> , 29(<i>Aspergillus: 50 years on</i>)
	Campbell et al. 1995 see Wakarchuk
	Davies et al., "Structures and mechanisms of glycosyl hydrolases," <i>Structure</i> , 1995, 3(9):853-9.
	Devereux et al., "Acomprehensive set of sequence analysis programs for the VAX," <i>Nuc. Acids Research</i> , VI2:1, pp. 387-395 (1984)
	*Hale & Marham, THE HARPER COLLINS DICTIONARY OF BIOLOGY, Harper Perennial, NY (1991) BOOK NOT SENT

Examiner	Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not

considered. Include copy of this form with next communication to applicant.

PTO-1449

INFORMATION DISCLOSURE CITATION

Attorney Docket No.: GC812-US	Serial No.: 10/565,954
Applicant: Clarkson et al.	
Filing Date: July 31, 2006	Group: 1652
Page <u>2</u> of <u>3</u>	Date of this Submission: October 27, 2006

OTHER DOCUMENTS

Examiner's	
Initials	Author, Title, Date, Pertinent Pages, etc.
	Harris et al., "Structural basis of the properties of an industrially relevant thermophilic xylanase," <i>Proteins</i> , 29, 77-86 (1997)
	Henrissat, B. and Bairoch, A., "New families in the classification of glycosyl hydrolases based on amino acid sequence similarities," <i>Biochem. J.</i> , 293 781-8 (1993)
	Henrissat, B. and Davies, G., "Structural and sequence-based classification of glycoside hydrolases," <i>Curr. Opin. Struct. Biol.</i> 7 637-44 (1997)
	Higgins DG & Sharp PM, "Clustal: a package for performing multiple sequence alignment on a microcomputer," <i>Gene</i> 73(1), 237-244 (1988)
	Livingstone et al., "Protein sequence alignments: a strategy for the hierarchical analysis of residue conservation," <i>Comput. Appl Biosci.</i> , V9:6, 745-756 (1993)
	Matthes et al., "Simultaneous apid chemical synthesis of over one hundred oligonucleotides on a microscale," <i>EMBO J.</i> , V3:4, p 801-805, (1984)
	Morinaga et al., "Improvement of Oligonucleotide-Directed Site-Specific Mutagenesis using double-stranded plasmid DNA," <i>Biotechnology</i> (1984) 2, p646-649
	Nelson and Long , "A General Method of Site-Specific Mutagenesis Using a Modificxation of the Thermus acquaticus Polymerase Chain Reaction," <i>Analytical Biochemistry</i> V180, p 147-151), (1989)
	Nielsen et al., "Identification of prokaryotic and eukaryotic signal peptides and prediction of their cleavage sites," <i>Protein Eng.</i> 1997 10:1 pp 1-6
	Prade, R.A., "Xylanases: from biology to biotechnology," <i>Biotechnol. Genet. Eng. Rev.</i> , 13, 101- 131 (1996)
	Saiki R K et al. "Primer-Directed Enzymatic Amplification of DNA with a Thermostable DNA Polymerase," <i>Science</i> , V239, pp 487-491, (1988)
	*Singleton, et al., DICTIONARY OF MICROBIOLOGY AND MOLECULAR BIOLOGY, 2D ED., John Wiley and Sons, New York (1994) BOOK NOT SENT
	*Sambrook, E. F. Fritsch, and T. Maniatis, 1989, <i>Molecular Cloning: A Laboratory Manual</i> , Second Edition, Books 1-3, Cold Spring Harbor Laboratory Press BOOK NOT SENT
	Sandgren et. al., "The x-ray Crystal Structure of the Trichoderma reesei Family 12 Endoglycanase 3, Cel12A, at 1.9 A Resolution ," <i>J. Mol. Bio.</i> (2001) 308, 295-310
	Sarkar and Sommer, "The "Megaprimer" Method of Site-Directred Mutagenesis," (<i>Biotechniques</i> (1990), V8:4, pp 404-407

Examiner	Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not

considered. Include copy of this form with next communication to applicant.

PTO-1449

INFORMATION DISCLOSURE CITATION

Attorney Docket No.: GC812-US	Serial No.: 10/565,954
Applicant: Clarkson et al.	
Filing Date: July 31, 2006	Group: 1652
Page <u>3</u> of <u>3</u>	Date of this Submission: October 27, 2006

OTHER DOCUMENTS

[illegible]

Examiner	Date Considered
<p>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not</p>	
<p>considered. Include copy of this form with next communication to applicant.</p>	
<p>PTO-1449</p>	